

LAVRENT'YEV, A.G.

Violators of standards. Standartizatsiia 29 no.5:51 My '65.
(MIRA 19:1)

LAVRENT'YEV, A.I.

Struggle for the catchment area and the transformation of
the hydrographic network. Vest.Mosk.un.Ser.biol., pochv.,
geol., geog. 14 no.2:205-216 '59. (MIRA 13:4)

1. Kafedra dinamicheskoy geologii Moskovskogo gos.universiteta.
(Rivers)

LAVRENT'YEV, A.I.

Indications of the cooling of the Selenga Valley in the Pleistocene.
Geol. i geofiz no.5:80-83 '60. (MIRA 13:9)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.
(Selenga Valley--Paleoclimatology)

LAVRENT'YEV, A.I.

Sloping surface of the bottom of the river valley, its dynamics,
morphology and loose cover as revealed by a study in the middle
and lower Yenisey Valley. Trudy Inst. geol. i geofiz. Sib. otd.
AN SSSR no.24:67-74 '64. (MIRA 18:1)

LAVRENT'YEV, A.I.

AYZENSHTADT, M.G.; LAVRENT'YEV, A.I.

Oxidation and digester shop work practices. Bum.prom.30 no.6:
16-19 Je '55. (MIRA 8:9)

1. Glavnyy inzhener Sukhonskogo tsellyulozno-bumazhnogo kombinata
(for Ayzenshtadt) 2. Nachal'nik proizvodstva kombinata (for Lav-
rent'yev)
(Paper industry)

~~LAURENT'YEV~~, Arkadiy Ivanovich [deceased]; KASHEKOV, Lev Yakovlevich,
inzhener; KRYUKOV, V.L., redaktor; PAVLOVA, M.M., tekhnicheskii
redaktor

[Mechanization of the water supply on stock farms] Mekhanizatsii
vodosnabzheniia zhivotnovodcheskikh ferm. Izd. 3-e, perer. i dop.
Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 295 p. (MLRA 9:9)
(Water supply, Rural)

SAKS, V.N., glav. red.; ARKHIPOV, S.A., zam. glav. red.; BISKE, S.F., red.; VDOVIN, V.V., red.; VOLKOVA, V.S., red.; GROMOV, V.I., red.; IVANOVA, I.K., red.; LAVRENTYEV, A.I., red.; MARTYNOV, V.A., red.; NIKOLAYEV, N.I., red.; STRELKOV, S.A., red.; TROITSKIY, S.L., red.; CHOCHIA, N.G., red.; SHANTSER, Ye.V., red.; SHATSKIY, S.B., red.

[Basic problems in the study of the Quaternary period; for the 7th Congress of INQUA, U.S.A., 1965] Osnovnye problemy izucheniya chetvertichnogo perioda; k VII Kongressu INQUA (SShA, 1965). Moskva, Nauka, 1965. 495 p. (MIRA 18:9)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut geologii i geofiziki. 2. Chlen-korrespondent AN SSSR (for Saks).

LAVRENT'YEV, A. I.

Structure of the Yenisey Valley in the region of the Abalakovo
narrowing. Geol. i geofiz. no.4:159-164 '65.

(MIRA 18:8)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

LAVRENT'YEV, A.K.; KUBAYEVSKIY, N.G.: SHCHEPIN, Ye.V.

Repairing large storage tanks without dismantling. Rats.1 izobr.
predl. v stroi. no.113:15-16 '55. (MLRA 9:4)
(Tanks)

LAVRENT'YEV, A.P. [deceased]:

"New data on the lymphatic system of the viscera" (Trudy of the
Leningrad Institute of Public Health, vol.35). Arkh, anat. gist.
1 embr. 35 no.4:110-111 J1-Ag '58 (MIRA 11:10)
(LYMPHATICS)

LAVRENT'YEV, Aleksandr Sergeyevich, strogal'shchik; GUROV, S., redaktor;
IGNAT'YEVA, A., tekhnicheskii redaktor

[A planer's workmanship] Masterstvo strogal'shchika. [Moskva]
Moskovskii rabochii, 1956. 55 p. (MLRA 10:2)

1. Moskovskiy stankozavod imeni S.Ordzhonikidze (for Lavrent'yev)
(Planing machines)

137-58-4-6735

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 62 (USSR)

AUTHORS: Tageyev, V.M., Ivanov, K.N., Bodyagin, D.Ya.,
Lavrent'yev, B.A.

TITLE. Improving the Quality of Steel Ingots and the Technical and Economic Level of Their Utilization (Uluchsheniye kachestva stal'nykh slitkov i tekhniko-ekonomicheskikh pokazateley ikh ispol'zovaniya)

PERIODICAL: V sb.: Metallurgiya. Moscow-Leningrad, AN SSSR, 1957.
pp 65-76

ABSTRACT: The results of investigations by Leningrad metallurgists in the theory of crystallization and the mechanism of the origin of various types of inhomogeneities in steel ingots are set forth; new types of ingots for forging and rolling, designed on the basis thereof, are described. Data on the employment of specialized forging ingots with smaller shrinkage heads, without shrinkage head, and with greater taper (10-12%), and on the use of hollow ingots, are presented.

A.Sh.

Card 1/1

1. Steel ingots--Development 2. Crystallization--Theory

LAVRENT'YEV, B. A

А.П.Пронин	Влияние отдельных элементов на свойства стали в процессе кристаллизации.
О.П.Мамедов	
Л.М.Бонин	
Ю.С.Гонимов	
М.А.Пашинский	Влияние условий роста на структуру микроструктуры металла.
В.П.Костяков	
Э.Н.Тютин	
С.Я.Соболев	Закономерности в зависимости от крутизны стальных листов различной конфигурации.
Е.А.Ковалев	Температурные условия заготовки из крутизны стальных листов.
С.Я.Соболев	
Ю.П.Соловьев	Влияние с повышенной деформацией на стальные листы.
В.А.Михайлов	
В.К.Гуляев	
А.К.Пронин	Нормирование расхода стали в производстве листовых стальных
В.П.Лавин	250-150 мм.
В.К.Лавин	
В.В.Гуляев	
Н.М.Гуляев	Исследование процесса изготовления листовых стальных
А.А.Маслов	250-150 мм.
А.А.Маслов	
В.В.Гуляев	

report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow-- 30 Jun 1959.

LAVRENT'YEV, B. I.

1-4E2C

Removal of scale from glass at elevated temperatures

and 5 g. of H_2SO_4 was at 15° 95, 18, 19, and 37%; at 45° 92, 64, 28, and 72.7%, and at 70° 63, 33, 28, and 12%. Dense films of SnO_2 formed from SnSO_4 in H_2SO_4 solution.

FILIMONOV, I.N., prof.; KONONOVA, Ye.P., prof.; LAVRENT'YEV, B.I., prof.;
PLECHKOVA, Ye.K., prof.; SNEZAREV, P.Ye., prof., zaslužennyy
deyatel' nauki; GRASHCHENKOV, N.I., otv.red.; BOGOLEPOV, N.K.,
prof., red.; DAVIDENKOV, S.N., red.; MIKHEYEV, V.V., prof.,
red.; RAZDOL'SKIY, I.Ya., red.; SMIRNOV, L.I., red.; FUTER,
D.S., prof., red.; SENCHILO, K.K., tekhn.red.

[Multivolume manual on neurology] Mnogotomnoe rukovodstvo po
nevrologii. Moskva, Gos.izd-vo med.lit-ry. Vol.1, book 1.
[Anatomy and histology of the nervous system] Anatomia i gisto-
logia nervnoi sistemy. 1959. 487 p. (MIRA 12:8)

1. Chlen-korrespondent AMN SSSR (for Filimonov, Razdol'skiy,
Smirnov). 2. Chlen-korrespondent AN SSSR (for Lavrent'yev, Grashchen-
kov). 3. Deystvitel'nyy chlen AMN SSSR (for Grashchenkov, Davidenkov).
(NERVOUS SYSTEM)

KAMAYEV, Vladimir Dorofeyevich, kand. ekon. nauk; LENSKAYA,
Svetlana Alekseyevna, kand. ekon. nauk; LAVRENT'YEV, D.F.,
red.

[The role of automation in the building of communism in the
U.S.S.R.] Rol' avtomatizatsii v stroitel'stve kommunizma v
SSSR. Moskva, Vysshaya shkola, 1963. 91 p. (MIRA 17:3)

41580

S/241/62/010/010/002/007
D296/D307

271220

AUTHORS: Leshchinskiy, I.A., Trusov, V.V., and Lavrent'yev, E.V.

TITLE: Fluorescent microscopic examination as a method for detecting early changes in the peripheral blood after exposure to ionizing radiation.

PERIODICAL: Meditsinskaya radiologiya, v. 10, no. 10, 1962, 32-35

TEXT: The present work was carried out under the leadership of Professor A.Ya. Gubergrits. Staining of blood films with acridine orange and examination of the leucocytes under the fluorescent microscope reveals early subtle reversible changes in the nuclei in the case of people exposed to the low doses of radioactive material used for therapeutic or diagnostic purposes in clinical practice - even in the absence of any clinical symptoms. These changes cannot be detected by the usual morphological examination of blood film. Normally the nuclei of leucocytes treated in the manner described exhibit an emerald green fluorescence and only 2 - 6 % of the nuclei fluoresce in a brilliant red or orange. After injection of therapeutic doses of I^{131} in thyreotoxicosis or of P^{32} in chronic leucosis and even
Card 1/2

Fluorescent microscopic examination ... S/241/62/010/010/002/007
D296/D307

after injection of the diagnostic low doses of I^{131} used to assess the thyroid function or after a single artificial radon bath, an increase in the proportion of nuclei with a red fluorescence up to 14 - 21 % can be observed, within 24 hours after exposure. The increase takes place in several separate waves. Similar changes, albeit of lesser degree, were found in persons exposed to occupational radiation hazards such as radiologists. None of these people showed any manifest quantitative or qualitative changes in the white cell count. The change in the fluorescence is based on subtle physico-chemical changes in the nucleic acids. The author underlines the simplicity and sensitivity of the method and its possible importance as an early warning in cases of subclinical radiation injuries.

ASSOCIATION: Kafedra gospiatal'noy terapii Izhevskogo meditsinskogo instituta (Department of Hospital Therapy, Izhevsk Institute of Medicine)

SUBMITTED: September 21, 1961

Card 2/2

AUTHORS: Startsev, V.I. and Lavrent'yev, F.F. 70-3-3-13/36

TITLE: X-ray Investigation of the Regions of Accommodation in the Twinning of Zinc (Rentgenograficheskoye issledovaniye oblasti akkomodatsii pri dvoynikovanii tsinka)

PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 3, pp 329 - 333 (USSR)

ABSTRACT: X-ray investigation of the zones of accommodation shows a lattice orientation which is different to that in neighbouring parts of the crystal and shows a fine structure in the zones. This result confirms earlier conclusions on the structure of the accommodation region based on indirect measurements by means of profilometer and interferometer. A boundary layer with a strongly distorted structure has been found between the main crystal and the zone of accommodation. Annealing leads to the disappearance of both twinned layer and disturbed boundary layer but the zone of accommodation itself does not vanish showing that it has greater thermal stability. X-ray diffraction pictures were taken using a wide-angle X-ray tube and provided a sophisticated method of measuring the angles between regions slightly inclined to each other. Angles of about 30' had to be measured.

Card 1/2 There are 4 figures and 7 references, 4 of which are Soviet

70-3-3-13/36
X-ray Investigation of the Regions of Accommodation in the Twinning
of Zinc

and 3 English.

ASSOCIATION: Khar'kovskiy institut mekhanizatsii sel'skogo
khozyaystva (Khar'kov Institute for the Mechanisation
of Agriculture)

SUBMITTED: July 19, 1957

Card 2/2

LAVRENT'YEV, F.F.; SOYFER, L.M.

Chamber for high-temperature research. Prib. i tekhn. eksp. no.3:
151 My-Je '60. (MIRA 14:10)

1. Khar'kovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta khimicheskikh reaktivov.
(High temperatures)

BENGUS, V.Z.; LAVRENT'YEV, F.F.; SOYFER, L.M.; STARTSEV, V.I.

Exposure of dislocations in calcite crystals. Kristallografiia
5 no.3:441-445 My-Je '60. (MIRA 13:8)

1. Khar'kovskiy filial Vsesoyuznogo nauchno-issledovatel'skogo
instituta khimicheskikh reaktivov:
(Calcite crystals)

LAVRENT'YEV, F.F.

S/070/60/005/03/006/008

E132/E360


AUTHORS: Lavrent'yev, F.F., Soyfer, L.M., and Startsev, V.I.

TITLE: Thermal Etching and Annealing of Twinned Layers in Crystals of Antimony 71

PERIODICAL: Kristallografiya, 1960, Vol. 5, No. 3, pp.472-475

TEXT: The study of twinned layers with dimensions 5 to 20 μ in single crystals of antimony has shown that annealing at 600 °C (for less than 5 hours) leads to the establishment of mono-crystallinity in the specimen. The twin boundaries and the glide steps are the place where the most intense thermal etching occurs. Edge dislocations have been discovered both in the parent crystal and in the twinned part. The dislocation lines lie in the $11\bar{1}$ plane. The $11\bar{1}$ planes in antimony are the directions of the principal cleavage. The crystals of antimony were obtained, after preliminary zone refining, by the Shubnikov-Obreimov method. Specimens were in the form of plates 2-3 mm thick and 10-12 mm in diameter. They were prepared by cleaving the crystal which had been grown. The deformation produced in this process gave rise to the twinned layers mentioned. The examination was carried out

Card 1/2



S/070/60/005/03/006/008

E132/E360

Thermal Etching and Annealing of Twinned Layers in Crystals of Antimony

with a MIM-7 metallurgical microscope using oblique illumination and by the divergent-beam X-ray technique (reflexions from 111 and 001 planes being used). Annealing at 600 ° was carried out in a current of hydrogen. Intense thermal etching accompanied the annealing process. A special high-temperature camera was used to follow the course of the etching under these conditions. There are 5 figures and 11 references: 8 Soviet and 3 English.

ASSOCIATION: Khar'kovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva (Khar'kov Institute for the Mechanisation and Electrification of Agriculture)
SUBMITTED: September 18, 1959

Card 2/2

E/070/60/005/005/019/026/XX
E132/E160

AUTHORS: Startsev, V.I., Bengus, V.Z., Lavrent'yev, E.F., and Soyfer, L.M.

TITLE: The Formation of Dislocations in the Twinning of Calcite

PERIODICAL: Kristallografiya, 1960, Vol.5, No.5, pp.737-743

TEXT: It is found that in calcite a twin boundary not containing dislocations is made visible by selective etching although the intensity of etching is significantly less than the intensity of etching at dislocations. The existence of incoherent twin boundaries containing dislocations has been experimentally shown. In the crystal in the twinning process complete dislocations are formed. The twins were produced by Garber's method (Ref.5). Twin layers were studied on the face of the crystal not forming steps on twinning, i.e. 100 or 010. The twin plane could be indexed as 110 with the boundaries of the twinned layers parallel to [001].

There are 4 figures and 12 references: 11 Soviet and 1 English.

ASSOCIATION: Vsesoyuznyy institut khimicheskikh reaktivov, Khar'kovskiy filial (All-Union Institute for Chemical Reagents, Khar'kov Branch)

Card 1/1

SUBMITTED: February 2 1960

S/126/62/013/003/016/023
E091/E135

AUTHORS: Lavrent'yev, F.F., and Startsev, V.I.

TITLE: On the structure of the accommodation region in
monocrystals of zinc and bismuth

PERIODICAL: Fizika metallov i metallovedeniye, v.13, no.3,
1962, 441-450

TEXT: Bismuth and zinc were purified by zone refining, and monocrystals of these metals of high purity were obtained. Specimens were cut from the monocrystals along the cleavage plane at liquid nitrogen temperature (in order to reduce deformation by slip). On splitting a crystal, stresses are set up under the action of which twinning bands form. Therefore, application of additional stress for the production of twins and accommodation regions is unnecessary. The specimens were studied with a metallurgical microscope, using oblique illumination, and with a microinterferometer. In order to expose dislocations in bismuth, monocrystals of this metal were etched in a solution consisting of 10 parts H_2SO_4 , 10 parts H_2O and 1 part HNO_3 (67%).
Card 1/3

On the structure of the ...

S/126/62/013/003/016/023
EO91/El35

The zinc crystals were irradiated with a converging beam and then annealed. A special attachment to the metallurgical microscope was constructed by means of which changes in the accommodation region during annealing could be kept under constant observation. After annealing, the zinc crystals were again irradiated and studied metallographically. Polygonisation of accommodation regions was observed to occur when the dimensions of the latter exceeded 100 μ . On annealing, fusion of blocks of polygonised accommodation regions occurs. The algebraic sum of the angles between the blocks agrees well with the resultant angles between the blocks produced after fusion, which confirms the dislocation structure of the accommodation region. Selective etching of monocrystals of bismuth showed that dislocations concentrate at the boundary between the accommodation region and the parent crystal. In zinc crystals no polygonisation of accommodation regions of less than 100 μ dimensions takes place during annealing; only a decrease of the width of this region occurs. Accommodation regions, the dimensions of which are less than 15 μ , disappeared completely after annealing for 5 hours at

Card 2/3

On the structure of the

S/126/62/013/003/016/023
E091/E135

410 °C, i.e. collapse of dislocation loops, representing the accommodation region, occurred.
There are 6 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh
temperatur AN USSR
(Physicotechnical Institute of Low Temperatures,
AS UkrSSR)

SUBMITTED: April 3, 1961

Card 3/3

L 18099-63 EWT(1)/EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3 JD

ACCESSION NR: AP3004101

S/0070/63/008/004/0632/0640

AUTHORS: Startsev, V. I.; Bengus, V. Z.; Kommik, S. N.; Lavrent'yev, F. F.

TITLE: Interaction of dislocations during twin growth in crystals

SOURCE: Kristallografiya, v. 8, no. 4, 1963, 632-640

TOPIC TAGS: dislocation, interaction, crystal, twinning, zinc, calcite, relief

ABSTRACT: The authors have studied the interaction of dislocations in zinc and calcite crystals. A high density of twinning dislocations and their paired correlates in the neighboring edges of fine twin layers in calcite have been detected experimentally. It has been found that the stress necessary to shift the edge of a thin twin layer (less than $1/\mu$) is much greater than that necessary to move the twin edge of a thicker layer. Different kinds of pile-ups of twinning dislocations were observed experimentally at the edges of twin layers. It has been shown that the distribution pattern of dislocations in these pile-ups is determined by the type of deposit. Experiments have also proved that the region of accommodation is repelled from the twin boundary in zinc crystals (because of the interaction of twinning and unit dislocations. It has been shown that the lack of agreement between the experimentally measured relief created by twinning in zinc and the relief

Card 1/2

L 18099-63

ACCESSION NR: AP3004101

plotted from geometrical constructions is due to slippage in a twin. The interaction of twinning and unit dislocations during untwinning of zinc crystals leads to the formation of nonbasic partial dislocations (observed experimentally), which may be the cause of increased strength. Orig. art. has: 6 figures.

ASSOCIATION: Fiziko-tekhmicheskij institut nizkikh temperatur AN USSR (Physical and Technical Institute of Low Temperatures, Academy of Sciences, Ukrainian SSR)

SUBMITTED: 06Mar63

DATE ACQ: 15Aug63

ENCL: 00

SUB CODE: PH

NO REF SOV: 007

OTHER: 005

Card 2/2

L 15467-63

EMP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3005432

S/0020/63/151/005/1071/1073

AUTHORS: Lavrent'yev, F. F.; Salita, O. P.

TITLE: Pyramidal slip in zinc crystals

SOURCE: AN SSSR. Doklady*, v. 151, no. 5, 1963, 1071-1073

TOPIC TAGS: slip in zinc crystal, dislocation displacement, metallurgy, elastic deformation, slip, zinc crystal

ABSTRACT: The mechanical stress which starts the movement of dislocations is an important physical characteristic of a crystal with respect to plastic deformation by slipping. The authors measured the stress necessary for dislocation displacement in the plane of a pyramid of the second kind, second order (122) in the direction [011] in zinc crystals. Single zinc crystals were subjected to pure bending deformation. The crystals were selectively etched before and after loading. Dislocations were then observed under the microscope with magnifications from 140X to 540X as displacements of the etch pits.

Card 1/2

L 15467-63

ACCESSION NR: AP3005432

2

The values of starting stresses varied by a factor of 2 or 3. "In conclusion, we express our deep gratitude to our scientific supervisor V. I. Startsev for constant attention to this work." Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk, UkrSSR (Low temperature physicotecnical institute, Academy of sciences, UkrSSR)

SUBMITTED: 13Jan63

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: PH, ML

NO REF SOV: 001

OTHER: 003

Card 2/2

L 24652-65 EWT(m)/EWP(b)/I/EWP(t) IJP(c) JD

ACCESSION NR: AP5004679

S/0126/64/018/003/0428/0436

244
27
B

AUTHOR: Lavrent'yev, F. F.

TITLE: Interaction of dislocations in zinc, bismuth and antimony associated with twinning

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 3, 1964, 428-436

TOPIC TAGS: crystal dislocation, crystal, zinc, bismuth, antimony, matter structure

Abstract: The article gives the results of a study of the phenomena accompanying twinning in crystals of zinc, bismuth, and antimony. The possible reactions of complete dislocations with complete and twinning dislocations are examined. Some of these reactions are confirmed experimentally.

The propagation of the twinning interlayer in zinc crystals is accompanied by a slip along the (001) and (100) planes of the matrix crystal, and along the (001)* planes of the twinning interlayer. Slip along (001) planes of the matrix crystal leads to the formation of an accommodation region.

At the boundary of the accommodation region in zinc and bismuth crystals there takes place an interaction between complete dislocations

Card 1/2

L 24652-65

ACCESSION NR: AP5004679

3

which leads to the appearance of new dislocations.

During the mechanical untwinning of zinc, bismuth, and antimony crystals, dislocations are formed as a result of the interaction of complete dislocations with twinning dislocations in the twin. During thermal untwinning, dislocations arise only in those areas where the boundaries of the twin had been located, and are absent from the area where the twin had been situated; this is attributed to the closing of the loops of complete dislocations in the twin during annealing.

The author expresses his gratitude to V. I. Startsev for his constant interest in the work, and to V. Z. Bengus and S. N. Komnik for an evaluation of the results. Orig. art. has 5 figures and 7 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR (Physico-technical Institute of Low Temperatures, AN UkrSSR)

SUBMITTED: 20Jul63

ENCL: 00

SUB CODE: SS, NP

NO REF SOV: 012

OTHER: 005

JPRS

Card 2/2

L 36108-66 ENT(1)/ENT(m)/T/ENP(t)/ETI IJP(c) JD/GG

ACC NR: AP6017312

(A)

SOURCE CODE: UR/0126/66/021/005/0793/0795

AUTHORS: Laurent'yev, F. F.; Soldatov, V. P.; Kazarov, Yu. G.

40

ORG: Institute of Physics and Technology of Low Temperatures, AN UkrSSR (Fiziko-
tekhnicheskiiy institut nizkikh temperatur AN UkrSSR)

TITLE: Growth of single crystals of zinc and bismuth of given form and crystallo-
graphic orientation

27 27 27

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 5, 1966, 793-795

TOPIC TAGS: zinc, bismuth, metal crystal, single crystal

ABSTRACT: An apparatus for the growth of metal single crystals of predetermined form and crystallographic orientation is presented. The developed apparatus supplements the device developed by Yu. V. Sharvin and V. F. Gantmakher (PTE, 1963, No. 6, 165). A schematic of the apparatus is presented (see Fig. 1). The performance of the apparatus was tested by growing zinc and bismuth single crystals. It is concluded that the method should prove useful for growth of single crystals of other high-melting metals.

Cord 1/2

UDC: 669-172:546.87

L 36108-66

ACC NR: AP6017312

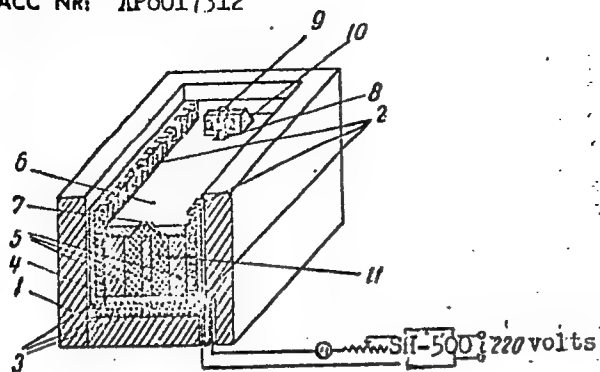


Fig. 1. Schematic of the installation for the growth of single crystals of zinc and bismuth. 1 - pyrophyllite box, 2 - box sections, 3 - heaters, 4 - pyrophyllite support, 5 - prismatic blocks, 6 - top, 7 and 8 - openings for control and addition of melt, 9 - seed, 10 - orienting support, 11 - melt.

Orig. art. has: 3 figures.

SUB CODE: 20/

SUBM DATE: 23Jul65/

ORIG REF: 005

LS
Card 2/2

BEREZNIKOV, V.V., kand.tekhn.nauk; LAVRENT'YEV, G.A., inzh.

Determination of the initial gap in the linking of a shaft and a plastic slide bearing. Mekh. i elek. sots. sel'khoz. 20 no.1:45 '62. (MIRA 15:2)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy tekhnologicheskii institut remonta i ekspluatatsii mashinno-traktornogo parka.

(Bearings (Machinery))

35680

15.8400 15.8360

S/032/62/028/004/024/026
B116/B104

AUTHORS: · Bereznikov, V. V., and Lavrent'yev, G. A.

TITLE: Attachment of thermocouples to parts of polymeric materials

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 4, 1962, 506

TEXT: A special device (Fig.) for attaching thermocouples to polycaprolactam (caprone) slide bearings is described. The needle 1 (0.5 - 0.4 mm diameter) is heated by the spiral 2 connected with a TP-17 (TR-17) transformer. The thermocouple 3 is connected over the terminals 4 and 5 with a ЛАТР-1 (LATR-1) transformer. The hot junction of thermocouple 3 is introduced in the notches of needle 1. The temperature of the needle and of the thermocouple wires should be slightly higher than the melting temperature of caprone. Spring 6 serves for tightening the thermocouple wires during adjusting and heating. After heating the needle and wires, the bearing 7, to which the thermocouple is to be attached, is approached to the hot junction. Under the action of its own weight, the bearing 7 shifts downward until touching the stage 8. The hot junction of the thermocouple is adjusted to the required depth of the bearing. The heating of the needle and of the thermocouple is interrupted, and the wires are

Card 1/2

Attachment of thermocouples...

S/032/62/028/004/024/026
B116/B104

removed from the terminals. The needle is heated and removed from the bearing 7. The depth of adjustment depends on the table height which is controlled by means of the nuts 9. The device described was used for attaching a copper-constantan thermocouple to slide bearings of 48 mm diameter, 3 mm wall thickness, and 40 mm width. The distance between the depth of adjustment and the sliding surface was 0.1 mm. At sliding velocities up to 2 m/sec, caprone starts melting at $\sim 125 - 130^{\circ}\text{C}$. At a sliding velocity of > 2 m/sec and a load of > 75 kg/cm², a jumplike increase of the bearing temperature was observed as from 100 - 105°C, and the bearings became useless. Maximum working temperature of caprone bearings is 100 - 110°C. There is 1 figure.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy tekhnologicheskii institut remonta i ekspluatatsii mashinno-traktornogo parka
(All-Union Scientific Research Technological Institute for the Repair and Utilization of Tractors and Machinery)

Card 2/3

ACCESSION NR: AP3000116

S/0122/63/000/005/0035/0039

AUTHOR: Lavrent'yev, G. A.

TITLE: Influence of polyamide resin coating on the sliding properties of friction bearings

SOURCE: Vestnik mashinostroyeniya, no. 5, 1963, 35-39

TOPIC TAGS: polyamide resin, layer thickness, bearings, shafts, loading, abrasion, temperature, coefficient of friction, vibration

ABSTRACT: The article presents experimental results obtained in applying polyamide resin layers of various thicknesses to the shaft and friction bearing assemblies. Layers ranging from 0.05 to 4.5 mm were tested and the amounts of unlubricated metal removed were investigated. The shafts were 48 sub -0.05 mm in diameter and 10 sub 00.1 in length. They were made of steel with HRC hardness 46-50 and had finished surfaces. For the type of bearings used see Fig. 1, Enclosure 1. The experiments were conducted under a constant load of 30 kg/Sq cm for 100 minutes. Thereafter the loads were increased at 5-minute intervals to 50, 100, 150, 200, and 250 kg/Sq cm. The speed of sliding was kept constant at 0.504 m/sec. The amount of metal abrasion was determined with an analytical balance. It was noted that

†
Card 1/1

ACCESSION NR: AP3000116

the decrease of resin thickness from 4.0 to 0.05 mm caused a 2- to 3-fold reduction in the amount of abrasion. However, at layer thicknesses of 0.08 to 0.1 mm an increase of abrasion on the steel shaft was observed. The increase of abrasion with the increased thickening of the layer is attributed to poorer heat removal; the increase at the very thin layers is attributed to the influence of surface imperfections below the layer and to inaccuracies of the assembly. Hard particles embedded in the polymer also contributed to abrasion. The coefficient of friction was found to increase with the thickness of the layer and to decrease with the load. This coefficient also decreased by 30 to 40% when a lubricant was applied, but at thicknesses below 0.2 mm this effect was reversed and an increase of temperature was observed. It is concluded, after discussing the shaft displacement due to the deformation of the polymer layer and the dynamic stresses caused by vibration, that for assemblies in which the shaft cannot be displaced the optimal layer thickness is 0.20 to 0.25 mm; when abrasion may occur, the thickness should be over 2.5 mm. For dynamic loading the thickness should range from 4.0 to 4.5 mm. A thickness of 0.1 mm should be considered the minimum for all cases, and 0.2 to 0.3 mm for those conditions under which abrasion occurs. Orig. art. has: 6 figures and 10 formulas.

ASSOCIATION: none

Cord 2/4

ACCESSION NR: AF3000116

SUBMITTED: 00

DATE ACQ: 11 Jun 63

ENCL: 01

SUB CODE: MD

NO REF SOV: 010

OTHER: 000

Card 3/4

ACCESSION NR: AP3000116

ENCLOSURE: 1

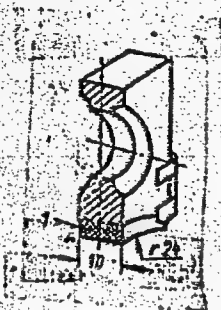


Fig. 1 Section of a bearing.

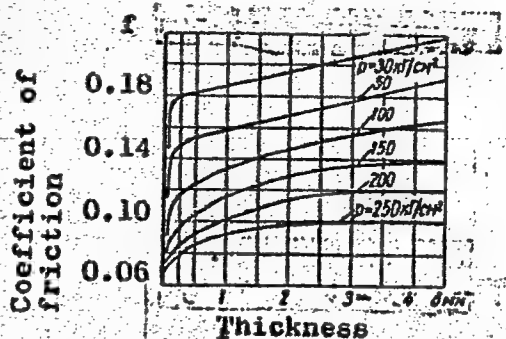


Fig. 2 Relation between the coefficient of friction and thickness of the polyamide layer.
(Loads, p, expressed in kg/Sq cm.)

Card 1/1

LAVRENT'YEV, G.T., inzhener.

Adjusting a forging hammer by means of an experimental slide valve. Vest.
mash. 33 no.3:36 Mr '53.
(MLRA 6:5)
(Forging)

140930-65 BMT(1)/POG CW

ACC NR: AP6011375

SOURCE CODE: UR/0362/66/002/003/0316/0319

AUTHOR: Gorshkov, A. I.; Ignat'yev, V. I.; Lavrent'yev, G. Ya.; Stefanovskiy, A. M.;
Yashukov, V. P.

ORG: none

TITLE: Effect of meteor streams on the electrical field of the atmosphere

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 3, 1966, 316-319

TOPIC TAGS: meteor, atmospheric electricity, electric field

ABSTRACT: Data on measurements of the electrical field of the atmosphere enabled the authors to study the effect of meteor streams on this field. The results of measurements of nine geophysical stations were used. The data on the electrical field of the atmosphere were analyzed by calculating the mean diurnal and mean monthly values of the field from the data of each geophysical station. These values were averaged for the three years of observations (1957-1959). Then the variations of the field, i.e., the differences between the mean diurnal and mean monthly values, were calculated. The calculated values and the change in the number of meteors for all three streams (Perseid, Geminid, and Quadrantid) were compared. The comparison readily showed that the Perseid meteors did not affect the electrical field of the atmosphere. An

Card 1/2

UDC: 551.594

.L 40930-66

ACC NR: AP6011375

6

increase of the field during the passage of meteors was noted only for the more powerful streams, such as Geminid and Quadrantid. However, the dispersion of the data did not permit considering this conclusion sufficiently reliable. Therefore the correlation method of analyzing the experimental data was used to elicit the assumed relation between the changes of the electrical field and the number of meteors. The confidence interval was also calculated for each stream. The correlation coefficient-stream intensity curve, for which the 10-min value of the number of meteors was taken, showed that for the most powerful streams the correlation coefficients had essentially positive value. Thus, statistical analysis of the results of the measurements showed with sufficient reliability that powerful meteor streams affect the electrical field of the atmosphere at the level of the earth. A detailed study of the relationship between these two phenomena and an explanation of the mechanism of this relation is needed for the final solution of this problem. Orig. art. has: 1 table and 3 figures.

SUB CODE: 03,04/ SUBM DATE: 02Jul65/ ORIG REF: 006/ OTH REF: 000

ms
Card 2/2

LAVRENT'YEV, I.G.; POYARKOV, G.P.

Production of three-layer steel. Izv.vys.ucheb.zav.; Chern.met. 8
no.8:38-40 '65. (MIRA 18:8)

1. Taganrogskiy metallurgicheskiy zavod.

LAVRENT'YEV, I.G.

New type of breaker. Metallurg 8 no.2:33-34 F '63. (MIRA 16:2)

1. Nachal'nik ameny Taganrogskogo metallurgicheskogo zavoda.
(Rolling mills—Design and construction)

L 20317-66 EWT(m)/EWP(t)/EWP(k) IJP(e) JD/HW
 ACCESSION NR: AP5020977

UR/0148/65/000/008/0038/0040
 669.141.002.2

AUTHOR: Lavrent'yev, I. G.; Poyarkov, G. P.

TITLE: Production of composed steel

SOURCE: IVUZ. Chernaya metallurgiya, no. 8, 1965, 38-40

TOPIC TAGS: composed steel, composed steel rolling, composed steel casting,
 composed steel production

ABSTRACT: Composed (three-layer) steel is rolled at two steel mills in the Soviet Union. At the Taganrog steel mill, the ingots are made of 3 layers: the outer layers are cast from high-carbon steel and the low-carbon steel core is cut from a plate or thick steel sheet. The core thickness has to be one-third the ingot thickness. For 670, 780, and 1080 kg ingots, the core plates are 56, 66, and 79 mm thick, respectively. Molten metal from below (bottom pouring) coming into contact with the cold mould walls and core begins to crystallize, producing a skin along the entire height of the ingot. The poured steel does not weld with the core (except the lower part of the ingot), but bridges a gap about 4 mm wide in the middle. A 240-mm thick ingot weighing one ton is rolled on a three-high mill 760/600/760 mm

Card 1/2

13
 12
 13

L 20317-66

ACCESSION NR: AP5020977

in 21 passes with a relative reduction increasing gradually from 10.4 to 22.2%, and an overall thickness reduction from 240 to 6 mm. The welding of layers takes place during rolling, mostly in the starting passes. According to regulations, the thickness of each outer layer must be not less than 25%, and the core not less than 30%, of the overall ingot thickness. The thickness of a nominal 6-mm thick sheet actually changed from 5.9 to 6.2 mm. For instance, a 6.2-mm thick sheet had upper, middle, and lower layers 2.0, 2.1, and 2.1 mm thick, respectively. Orig. art. has: 3 figures and 2 tables.

[WW]

ASSOCIATION: Taganrodskiy metallurgicheskiy zavod (Taganrog Steel Mill)

SUBMITTED: 24Sep64

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4085

Clad 18

5 Card 212 BK

LAVRENT'YEV, I.M.

Existence theorem for differential equations with discontinuous
right-hand sides. Dif. urav. 1 no.11:1477-1481 N '65.

(MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.
Submitted April 5, 1965.

L 14713-66 EWT(d) IJP(c)

ACC NR: AP6004083

SOURCE CODE: UR/0020/66/166/002/0284/0286

AUTHORS: Lavrent'yev, I. M.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

14.44.55
TITLE: Variational theory of nonlinear equations

SOURCE: AN SSSR. Doklady, v. 166, no. 2, 1966, 284-286

TOPIC TAGS: functional analysis, variational calculus

ABSTRACT: The author establishes new theorems on existence of a solution of

$$BF(x) = x, \quad (1)$$

where B is a linear indefinite operator and F(x) is a potential operator, without the assumptions of boundedness of B or that the positive part of the spectrum of B consists of a finite number of eigenvalues each of finite multiplicity. This allows him to apply the results established here not only to nonlinear integral equations of Hammerstein type but also to certain boundary value problems for nonlinear differential equations. Consideration is given to equations of the form

Card 1/2

L 14713-66

ACC NR: AP6004083

3

(1) in which the operator B is the first of all unbounded, and $F(x)$ is not assumed potential. Uniqueness is finally proved in certain cases by means of the concept of monotonicity of operators. This extends work of M. M. Vaynberg (DAN, 92, No. 3, 457, 1953) and (Variatsionnyye metody issledovaniya nelineynykh operatorov, 1956). The author expresses his gratitude to M. M. Vaynberg for the many valuable comments he made on this work, and to V. V. Nemytskiy for his attention. This paper presented by Academician A. N. Kolmogorov on 3 September 1965. Orig. art. has: 10 formulas.

SUB CODE: 12/

SUBM DATE: 03Sep65/

ORIG REF: 006

BVK
Card 2/2

LAVRENT'YEV, I.P.; VELICHKO, F.K.; CHIZHOV, Yu.P.

Telomerization of ethylene by carbon tetrachloride in the
presence of redox systems. Izv. AN SSSR. Ser. khim. no.4:
632-635 '65. (MIRA 18:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

VELECHKO, F.K.; LAVRENT'YEV, I.P.; CHIRNOV, Yu.P.

Determination of transfer constant for a trichloropropyl radical
in the telomerization of C_2H_4 with CCl_4 in an open system. Izv.
AN SSSR. Ser.khim. no.1:172-174 '66.

(MIRA 19:1)

1. Institut elementoorganicheskikh soedineniy AN SSSR. Submitted
May 20, 1965.

8(0)

SOV/112-59-4-7555

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 157 (USSR)

AUTHOR: Lavrent'yev, K. A.

TITLE: Device for Quality Control of Capacitors

PERIODICAL: Radiotekhn. proiz-vo, 1957, Nr 13, pp 34-35

ABSTRACT: A PME-1 device for testing KBG-MP capacitors is described. The device is actually a capacitance bridge which compares the under-test capacitor in one arm with a standard capacitor in the other. A phase-sensitive rectifier and a microammeter serve as a zero indicator. The scale shows per cent deviation of capacitance from the rating. The spread zones ± 5 , ± 10 , and $\pm 20\%$ are marked with different colors. One illustration.

V.F.R.

Card 1/1

LAVKENT'YEV, K.G.

VOTLOKHIN, B.Z.; LAVRENT'YEV, K.G.

Introduction of electromechanical bulk product level indicators
in industrial installations of petroleum refineries. Azerb. neft.
khoz. 36 no.6:34-35 Je '57. (MLRA 10:9)
(Liquid level indicators)

STRIGINA, L.R.; LAVRENT'YEV, K.G.; BRESHCHENKO, Ye.M.

Increasing the wear resistance of a granulated refractory clay
used as a heat carrier. Nefteper. i neftekhim. no. 11:13-15 '63.
(MIRA 17:5)

1. Groznenskiy neftyanoy nauchno-issledovatel'skiy institut.

MELKUMYAN, B.G., podpolkovnik meditsinskoy sluzhby; LAVRENT'YEV, K.I.,
kapitan meditsinskoy sluzhby

Experience in the prevention of colds in military personnel.
Voen.-med.zhur. no.3:74-75 Mr '61. (MIRA 14:7)
(COLD (DISEASE))

LAVRENT'YEV, L.N. (Leningrad, P-61, Petrogradskaya naberezhnaya, 26/28, kv.21)

Malignant intestinal tumors in rats following prolonged ingestion of strontium 90 through the intestinal tract. Vop. onk. 10 no.1:7-11 '64.

(MIRA 17:11)

1. Iz laboratorii toksikologii radioaktivnykh veshchestv (zav. - N.A. Zapol'skaya) Leningradskogo nauchno-issledovatel'skogo instituta radiatsionnoy gigiyeny (dir. - M.A. Nevstruyeva).

LAURENT'YEV L.N.

28-6-19/40

AUTHORS: Gafanovich, A.A., Candidate of Technical Sciences and Laurent'yev, L.N., Engineer

TITLE: The Wheels of Agricultural Machines (Kolesa sel'skokhozyaystvennykh mashin)

PERIODICAL: Standartizatsiya, 1957, # 6, pp 51-55 (USSR)

ABSTRACT: The standard "ГОСТ 3020-51" for wheels of agricultural machines has been replaced by the new "normal" standard "ОН-13-63-57". The article contains detailed information on this new "normal" which was worked out by the All-Union Institute of Agricultural Machinebuilding (VISKhOM) (Vsesoyuznyy institut sel'skokhozyaystvennogo mashinostroyeniya).

The information includes the calculation formulas underlying the new normal; the geometrical data on rim cross sections (table 2) and detailed drawings of plough wheel "K - 1", cultivator wheel "K - 3", and harvester wheel "K - 13" are given.

It is said that the new "normal"-standard will create pre-conditions for specialized production of wheels at 2 or 3 plants situated in different regions of the country.

There are 2 tables, 3 drawings and 1 diagram.

Card 1/2

The Wheels of Agricultural Machines

28-6-19/40

ASSOCIATION: All-Union Institute of Agricultural Machinebuilding (VISKhOM)
(Vsesoyuznyy institut sel'skokhozyaystvennogo mashinestroyeniya)

AVAILABLE: Library of Congress

Card 2/2 1. Industry-USSR 2. Agriculture machines-Wheels-Standards

VOLKOV, Yu.I., inzh.; GAFANOVICH, A.A., kand.tekhn.nauk; GLADKOV, N.G.,
kand.sel'skokhoz.nauk; GORKUSHA, A.Ye., agr.; ZHITNEV, N.F., inzh.;
ZANIN, A.V., kand.tekhn.nauk; ZAUSHITSYN, V.Ye., kand.tekhn.nauk;
ZVOLINSKIY, N.P.; ZEL'TSERMAN, I.M., kand.tekhn.nauk; KAIPOV, A.N.,
kand.tekhn.nauk; KASPAROVA, S.A., kand.sel'skokhoz.nauk; KOLOTUSHKINA,
A.P., kand.ekon.nauk; KRUGLYAKOV, A.M., inzh.; KURNIKOV, I.I., inzh.;
LAVRENT'YEV, L.N., inzh.; LEBEDEV, B.M., kand.tekhn.nauk; LEVITIN,
Yu.I., inzh.; MAKHLIN, Ye.A., inzh.; NIKOLAYEV, G.S., inzh.;
POLESHCHENKO, P.V., kand.tekhn.nauk; POLUNOCHIEV, I.M., agr.; P'YANKOV,
I.P., kand.sel'skokhoz.nauk; RABINOVICH, I.P., kand.tekhn.nauk;
SOKOLOV, A.F., kand.sel'skokhoz.nauk; STISHKOVSKIY, A.A., inzh.;
TURBIN, B.G., kand.tekhn.nauk; CHABAN, I.V., inzh.; CHAPKEVICH, A.A.,
kand.tekhn.nauk; CHERNOV, G.G., kand.tekhn.nauk; SHMELEV, B.M., kand.
tekhn.nauk; KRASNICHENKO, A.V., inzh., red.; KLETSKIN, M.I., inzh.,
red.; MOLYUKOV, G.A., inzh., red.; BLAGOSKLONOVA, N.Yu., inzh., red.;
UVAROVA, A.F., tekhn.red.

[Reference book for the designer of agricultural machinery in two
volumes] Spravochnik konstruktora sel'skokhoziaistvennykh mashin
v dvukh tomakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.
lit-ry. Vol.1. 1960. 655 p. (MIRA 13:11)
(Agricultural machinery--Design and construction)

LAVRENT'YEV, L.N. (Leningrad)

Cancer of the lower third of the trachea. Arkh.pat 18 no.3:94-95
'56 (MIRA 11:10)

(TRACHEA, neoplasms
diag. & surg. (Rus))

LAVRENT'YEV, L.N., kand.med.nauk (Leningrad, 6-ya Sovetskaya ul., d.10, kv.5)

Autogenic anaerobic infection in animals subjected to large doses
of roentgen rays [with summary in English, p.139]. Vest.khir. 79
no.12:83-84 D '57. (MIRA 11:1)

1. Iz patologoanatomicheskoy laboratorii (nach. - G.N.Manucharyan)
(INFECTION, exper.
eff. of x-irradiation on autogenic anaerobic infect.
in guinea pigs)
(ROENTGEN RAYS, eff.
on autogenic anaerobic infect. in guinea pigs)

GAFANOVICH, A.A., kand.tekhn.nauk; LAVRENT'YEV, L.N., inzh.

New lighter-weight parts and units of agricultural machines. Trakt.
i sel'khoz mash. 33 no.5:27-30 My '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyayst-
vennogo mashinostroyeniya.

LAVRENT'YEV, L.N. (Leningrad)

Pneumonia in rats caused by cooling 5 months following roentgen
irradiation. Med.rad. 6 no.8:77-78 Ag '61. (MIRA 14:8)
(RADIATION SICKNESS) (PNEUMONIA)
(COLD--PHYSIOLOGICAL EFFECT)

LAVRETSKIY, L.N., inzh.; ORLOVSKIY, B.Ya., inzh.-arkh.; FINKINSHTEYN,
B.A., inzh.; EZDRIN, K.B., inzh.; UKRAINCHIK, M.M., inzh.,
red.

[One-story industrial building with no monitor and with a flat roof and a large network of columns]Oдноetazhnoe bes-fonarnoe promyshlennoe zdanie s ploskoi krovlei i krupnorazmernoi setkoi kolonn; iz opyta tresta "Mosstroy-5" Glavmosstroia. Moskva, Gosstroizdat, 1961. 72 p. (MIRA 15:9)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. Byuro tekhnicheskoy informatsii. 2. Zamestitel' upravlyayushchego trestom "Mosstroy-5" (for Orlovskiy). 3. Starshiy prepodavatel' Vsesoyuznogo zaochnogo politekhnicheskogo instituta (for Finkinshteyn). 4. Rukovoditel' gruppy metodicheskikh kabinetov tresta "Mosorgstroy" Glavnogo otdeleniya po zhilishchnomu i grazhdanskomu stroitel'stvu v g. Moskve (for Ezdrin).
(Moscow--Factories--Design and construction)

LAVRENT'YEV, L.N.

(Moskva)

Functional state of the pancreas in cholecystitis. Klin. med.
41 no.2:94-99 F*63 (MIRA 17:3)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - zasluzhennyy deyatel' nauki Prof. A.A. Shelagurov) II Moskovskogo instituta imeni N.I. Pirogova.

LAVRENT^YEV, L. S. Engr

The magnetic control of hardness of the heat treated parts

Vest Mash p. 77, Sep 51

SAVIN, V.; LAVRENT'YEV, M.

We will improve the operation of the United Volga Steamship
Companies. Rech.transp. 14 no.4:25-28 Ap '56. (MLRA 9:8)

1. Zamestitel' glvnogo dispetchera po tyage (for Savin); 2. Zame-
stitel' glavnogo dispetchera po tonnazu (for Lavrent'yev).
(Volga River--Steamboat lines)
(Inland water transportation)

LAVRENT'YEV, M., inzh.; OL'SHAMOVSKIY, S., inzh.

Providing safe sailing for ships with underwater wings during the
dark hours. Rech.transp. 21 no.7:45-47 J1 '62. (MIRA 15:8)
(Planning hulls) (Beacons)

VASIL'KOV, G., kand.veterinarnykh nauk; POLYKOVSKIY, M.D.; KUDRYAVTSEV, A.A.;
MAMADZHANOV, I.; MOLDABAYEV, Zh.; LAVRENT'YEV, M.; KHERUVIMOV, V.P.;
KURANOV, Yu.

Throughout the Soviet Union. Veterinariia 37 no.4:91-96 Ap'60
(MIRA 16:6)

1. Uchenyy sekretar' veterinarnoy seksii Vsesoyuznoy akademii
sel'skokhozyaystvennykh nauk imeni Lenina (for Vasil'kov).
(VETERINARY RESEARCH) (VETERINARY MEDICINE)
(VETERINARY HYGIENE)

Khrenov

ACC NR: AN7002513

SOURCE CODE: UR/9003/67/000/020/0001/0001

AUTHOR: Lavrent'yev, M. (Academician; Novosibirsk)

ORG: none

TITLE: Improvement of scientific and industrial ties in Siberia

SOURCE: Izvestiya, no. 20, 24 Jan 67, p. 1, cols. 1-3

TOPIC TAGS: research facility, scientific research

ABSTRACT:

Recently, the Soviet government decided to organize design-technological offices and experimental sections in various ministries and departments whose purpose will be to develop closer ties between scientific institutions and the scientists of the Siberian division and industry. In this connection, the chairman of the Siberian division, Academician M. A. Lavrent'yev, discusses at length the purposes and problems of the newly organized design offices.

SUB CODE: ^{05/}~~11~~ SUBM DATE: 23Jan66 / ATD PRESS: 5111

Card 1/1

LAVRENT'YEV, M. A.

Sur la recherche des ensembles homeomorphes. C. R. Acad. Sci., 178 (1924), 187-190.

Sur la représentation des fonctions mesurables b par les séries transfinies de polynomes. Fund. Math., 5 (1924), 123-129.

Contribution à la théorie des ensembles homeomorphes. Fund. Math., 6 (1924), 149-160.

Sur les sous-classes de la classification de M. Baire. C. R. Acad. Sci., 180 (1925), 111-114.

Sur la représentation conforme. C. R. Acad. Sci., 184 (1927), 1407-1409.

Sur un problème de M. P. Montel. S. R. Acad. Sci., 184 (1927), 1634-1637.

K teorii konformnykh otobrazheniy. Trudy fiz. - matem. in-ta im. steklova, 5 (1934), 159-246.

O nekotorykh svoystvakh odnolistnykh funktsiy. DAN, 1 (1935), 1-4.

Sur une classe de représentations continues. Matem. SB., 42 (1935), 407-424.

LAVRENT'YEV, M. A. Con't.

O semeystvakh odnolistnykh funktsiy. L., trudy vtorogo vsesoyuzn. Matem. s"ezda, T. 2 (1936), 170-172.

Sur les fonctions variable complexe représentables par des séries de polynômes. Actual Sci. et Industr., 441 (1936), 1-62.

O nekotorykh granichnykh zadachakh v teorii odnolistnykh funktsiy. Matem. SB., 1 (43), (1936), 815-846.

O nepreryvnosti odnolistnykh funktsiy v zamknutykh oblastiakh. DAN, 4 (1936), 207-210.

K teorii struy. DAN, 18 (1938), 225-226.

O nekotorykh svoystvakh odnolistnykh funktsiy s prilozheniyami k teorii struy. Matem. SB., 4 (46), (1938), 391-458.

K teorii struynykh techeniy. DAN, 20 (1938), 239-240.

Kvazikonformnyye otobrazheniya i ikh proizvodnyye sistemy. DAN, 52 (1946), 287-290.

Obshchaya problema kvazikonformnykh otobrazheny ploskikh oblastey. DAN, USSR, 3-4 (1946), 3-10.

LAVRENT'YEV, MA. CON'T.

Ob odnoy teoreme ostrovskogo tbilisi, soobshch. Gr. Fil. AN, 1 (1940), 171-174.

Sur la représentation conforme. S. R. Acad. Sci., 191 (1930), 1426-1427.

O nekotorykh svoystvakh odnolistnykh funktsiy. Matem. SP., 2 (44), (1937), 319-326.

Sur une équation différentielle du premier ordre. Math. Z., 23 (1925), 197-209.

SO: Mathematics in the USSR, 1917-1947

Edited by Kurosh, A. G.

Markusevich, A. I.

Rashevskiy, P. K.

Moscow-Leningrad, 1948

LAVRENT'EV, H.A.

O postroenii ptooka, obtekaiushchego dugu zadannoi formy. Moskva, 1932. 55 p.,
diagrs. (TSAGI. Trudy, no.118)

Summary in German.

Title tr.: Determination of the airflow around a profile of a given shape.

QA911.M65 no.118

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress
1955

LAVRENT'EV, M.A.

Ob odnoi ekstremal'noi zadache v teorii kryla aeroplana. Moskva. 1934.
85 p., diags. (TSAGI. Trudy, no. 155)

Summary in German.

Title tr.: A problem of extreme magnitudes of functions in the wing theory.

QA911, M65 no.155

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress,
1955

LAVRENT'EV, M.A., IA. I. SEKERZH-ZEN'KOVICH and V.M. SHEPELEV.

K teorii biplannoi korobki kryl'ev. Moskva, 1935. 38 p. diagrs. (TSAGI. Trudy, no. 153

Summary in English.

Title tr.: Biplane theory.

QA911.m65 no.153

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

LAVRENTYEV, M. A.

LAVRENTYEV, M. A., and others.

Sbornik statei po voprosam udara o poverkhnost' vody. Moskva,
1935. 47 p., diags. (TSAGI. Trudy, no. 152)

Summary in English.

Other authors: M. V. Keldysh, A. I. Markushevich, L. I. Sedov, and
A. B. Lotov.

Title tr.: Collected articles on the problems of the impact against
the surface of water.

QA911.M65 No. 152

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

LAVRENT'YEV, M.A. and KELDYSH, M.V.

"K Teorii Kolblyushchegosya Kryla," Tekhnicheskiye Zametki, TsAGI,
No. 45, 1935.

LAVRENT'YEV, M. A.
KELDYSH, V.V., and M.A. LAVRENT'YEV

O dvizhenii kryla pod poverkhnost'iu tiazheloi zhidkosti. (In: Konferentsiia po teorii volnovogo soprotivleniia. Moscow, 1937. Trudy, p.21-64, diagrs.)

Summary in English.

Title Tr.: Motion of an airfoil below the surface of a heavy fluid.

. TL505.K6 1936

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

LAVRENT'YEV, M. A.

"On a Problem of M. Carleman," Dok. AN 23, No. 8, 1939.

Inst. of Steklov, Acad. Sci.

LAVRENT'YEV, Mikhail Alekseyevich

"Concerning an Evaluation of Green's Function," Dok. AN 24, No. 2, 1939.

W.F.

LAVRENTYEV, M.A.

*Atmospheric + Atmospheric
Electricity*

102; A CONTRIBUTION TO THE THEORY OF LONG-
WAVES (in a Heavy Fluid: Rayleigh Waves.
etc.) M. A. Lavrentyev. (Comptes Rendus
(Doklady) de l'Ac. des Sci. de l'URSS, 10th
Dec. 1943, Vol. 41, No. 7, pp. 275-277.
in English)

LAVRENT'EV, Mikhail Alekséyevich, 1900-

Regular reflections and their application to certain problems of mechanics Moskva,
Gos. izd-vo tekhniko-teoret. lit-ry, 1946. 158 p. (Fiziko-matematicheskaya biblioteka
inzhenera) (51-26677)

QA646.L38

LAVRENT'YEV, M. A.

Lavrent'ev, M. The general problem of quasi-conformal mappings of plane regions. Rep. [Dopovidi] Acad. Sci. Ukrainian SSR no. 3-4, 3-10 (1946). (Ukrainian and English)

Replace the Cauchy-Riemann equations of conformal mapping by two quite general relations

$$(1) \quad \Phi_i(x, y, u, v, u_x, u_y, v_x, v_y) = 0, \quad i=1, 2.$$

The problem is to find one-to-one maps of one region D onto another Δ by functions $u=u(x, y)$, $v=v(x, y)$ satisfying (1). Under conditions on (1) which the author terms strong ellipticity, it is stated that there exists a one-parameter family of such maps from an infinite strip between two sufficiently smooth curves to a parallel strip, and at least a three-parameter family of maps from one simply connected region to another. Certain extremal properties are mentioned, but the reviewer was not able to grasp their significance. No proofs are indicated.

L. Ahlfors.

Source: Mathematical Reviews

Vol 8 No. 6

LAVRENT'YEV, M. A.

"Quasi-Conforming Representations and their Derivative System," Dok. AN 52,
No. 4, 1946.

Acad. Sci. Ukraine

LAVRENT'YEV, M.

Lavrent'ev, M. Sur la théorie exacte des ondes longues.
Akad. Nauk Ukrain. RSR. Zbirnik Prac' Inst. Mat. 1946.
no. 8, 13-69 (1947). (Ukrainian. Russian and French
summaries)

Consider two-dimensional steady irrotational motion of
a heavy incompressible ideal fluid in a channel. Let $y = y_0(x)$ the
be the equation of the bottom of the channel and $y = y(x)$ the
equation of the free surface. Let h denote the rate of dis-
charge of the fluid per unit width. Let $f(z) = \varphi + i\psi = f$ be
the complex potential mapping the strip $y_0(x) \leq y \leq y(x)$ in
the z -plane onto the strip $0 \leq \psi \leq h$ in the ζ -plane. A funda-
mental problem in the theory of surface waves is to find
the class of curves $y(x)$ such that

$$|f'(z)|^2 + 2gy - B = 0 \quad \text{for } y = y(x),$$

where g is the acceleration of gravity and B is some con-
stant. Levi-Civita and A. I. Nekrasov independently proved
the existence of periodic solutions to this problem under
certain restrictions. In this paper the author establishes the
existence of periodic solutions over a periodic bottom for
sufficiently large period, and, in addition, obtains as a
limiting case the existence of a solitary wave over a flat
bottom. The proof, developed in a long series of lemmas,
employs the variational methods in conformal mapping
developed by the author and depends in particular on his
earlier paper on jets [Mat. Sbornik N.S. 4(46), 391-458
(1938)].

Misprints are so numerous and frequently of such a con-
fusing nature that trying to follow the details of many of
the proofs is (to the reviewer) a frustrating experience. In
addition, the equations are not always dimensionally con-
sistent so that the hydrodynamic significance of some of the
restrictions is not always clear; however, the preliminary
announcement of these results [C. R. (Doklady) Acad. Sci.
URSS (N.S.) 41, 275-277 (1943); these Rev. 6, 191] pro-
vides some of the necessary background. The importance of
the results would seem to have merited more careful exposi-
tion and printing (as well as publication in a more widely
read journal and language). J. V. Wehausen.

MATHEMATICAL
VOL. 14, No. 1.

MATHEMATICAL REVIEWS (Unclassified)
Vol. 14, No. 1, January 1953, pp. 1-120

LAVRENT'YEV, M. A.

"Jubilee Session of the Department of Physicomathematical Sciences," Vest. Ak.
Nauk SSSR, No. 2, 1948.

LAVRENT'YEV, M. A.

FA 7/49T66

USSR/Mathematics - History
Mathematics - Function Theory

Jul/Aug 48

"Development Trends of Soviet Mathematics," M. A.
Lavrent'yev, 6 pp

"Iz Ak Nauk SSSR, Ser Matemat" Vol XII, No 4

Discusses subject under (1) mathematics in Russia at the Revolution, (2) general character of Soviet mathematics, (3) theory of numbers and algebra, (4) theory of functions, topology, and functional analysis, (5) analytical functions, (6) ordinary differential equations, (7) differential equations in partial derivatives, (8) geometry, (9) theory of probability, and (10) calculating machines.

7/49T66

(4) $y_{11} - \alpha_1 y_{12} - \alpha_2 y_{13} = \alpha_1$, $\alpha_1 = \alpha_1(x, y, z, v, z, v)$, $\alpha_2 = \alpha_2(x, y, z, v, z, v)$, $\alpha_3 = \alpha_3(x, y, z, v, z, v)$, under boundary conditions: $y(x, 0) = Y_1(x)$, $y(x, 1) = Y_2(x)$. [See also Lavrent'ev, Mat. Sbornik N.S. 21(63), 285-320 (1947); these Rev. 10, 290.]
The special case where $\alpha_k, k=1, 2, 3$, are independent of x and z is first considered. Due to the "strong ellipticity" of the basic system, (4) is elliptic, i.e., $-4\alpha_1 - \alpha_2^2 > 0$. (The author also makes some additional assumptions which he gets rid of subsequently.) The strip $0 \leq v < 1$ is divided into n strips S_i : $((i-1)/n) < v < (i/n)$, $i=1, 2, \dots, n$, and the author introduces an approximate solution $Y_n(x, v)$ which in each strip S_i satisfies the equation $y_{11} - \alpha_1 y_{12} - \alpha_2 y_{13} = \alpha_1$, where α_k approximate $\alpha_k, k=1, 2, 3$. He determines bounds for the variation of $Y_n(x, v)$ when the boundary values vary, and states that the $Y_n(x, v), n=N, N+1, \dots$ form a normal family, from which the existence of the solution of (4) (in the special case under consideration) follows. He next considers the general case, returning to the system (3). From the results in the special case it follows that a quasi-conformal mapping corresponding to a system

$$(5) \quad \begin{aligned} W &= F_1(V, \alpha, x, y, z, v, z, v)(X), \\ \theta &= F_2(V, \alpha, x, y, z, v, z, v)(X), \end{aligned}$$

exists. Dividing the strip $0 \leq v < 1$ into n strips S_i , and using the results previously obtained he constructs an approximate solution of (3) in every strip S_i , and shows that for $n=N, N+1, \dots$ these approximate solutions form a normal family, from which the existence of a unique solution of the original equation (3) is concluded. In order to prove the results a number of theorems on quasi-conformal transformation, e.g., an analogue of the Schwarz-Lindelöf principle are used. It would be desirable for the author to present some of his considerations in more detail.

S. Bergman (Cambridge, Mass.).

Source: Mathematical Reviews,

Vol 11 No. 4

Laurent'ev, M. A. Card 2 of 2

LAVRENT'YEV, M. A.

"Awarding of the Stalin Prizes," Uspekhi Matemat. Nauk, Vol 4, No. 3, 1949.

LAVRENT'YEV, M. A.

Lavrent'ev, M. A., and Isimskii, A. Yu. The dynamical forms of the loss of stability of elastic systems. Doklady Akad. Nauk SSSR, N.S. 64: 779-782 (1949). (Russian)
The nonlinear equations of unstable equilibrium of a rod and tube. I. C. Lavrent'ev, A. Yu. Isimskii, N. H. Piter'skiy.

Source: Mathematical Reviews.

vol. 10, no. 7

LAVRENT^YEV, Mikhail Alekseevich, 1900

Liusternik, Lazar' Aronovich, 1899- jt. au

A course in calculus of variations. Dopushcheno v kachestve uchebnika dlia gos. universitetov. Izd. 2., perer. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1950. 296 p.
(51-26231)

QA315.L3 1950 RFB

LAURENT'YEV, M. A.

3
3
3

Laurent'ev, M. A., and Bicadze, A. V. On the problem of equations of mixed type. Doklady Akad. Nauk SSSR (N.S.) 70, 373-376 (1950). (Russian)

For each number k such that $0 < k \leq 1$, let D_k be the open set in the (x, y) -plane whose boundary is $L = L_1 \cup L_2$, where L is a smooth Jordan arc situated in the upper half plane $y \geq 0$ save for its end points A and B . L_1 is the straight line segment $y=0, x \in [0, k]$, and L_2 is the straight line segment $y=1, x \in [k, 1]$. The following mixed boundary value problem is considered: to determine a solution $u(x, y)$ of the equation $u_{xx} + \theta(y)u_{yy} = 0$ (where the step function $\theta(y)$ equals 1 for $y > 0$ and -1 for $y < 0$) in the open set D_k minus the open segment AB of the x axis joining A and B , the function u having continuous first partial derivatives in the closure of D_k , save perhaps at A and at B , and satisfying the boundary conditions $u = \varphi$ on L_1 and $u = \psi$ on L_2 , where φ and ψ are given functions such that $\varphi(A) = \psi(A)$. For $k=1$ this boundary value problem is akin to that dealt with by Tricomi [Atti Accad. Naz. Lincei,

Mem. Cl. Sci. Fis. Mat. Nat. (5) 14, 134-247 (1924)] for the equation $yu_{xx} + u_{yy} = 0$. (The authors also discuss a more complicated boundary value problem for the case $k < 1$, which they call the "generalized Tricomi problem.") The open subset of D_k which is bounded by the straight line segment AB of the x axis, $k < 1$, allows the problem for $k=1$ can be reduced to the determination of a function harmonic in D_k having prescribed boundary values on L and a prescribed directional derivative (in a fixed direction) on AB , and by a subsequent conformal mapping to an ordinary Dirichlet problem. For k not necessarily 1, the boundary value problem is reduced to the determination of a function harmonic in D_k having prescribed boundary values on L , and whose tangential and normal derivatives satisfy a certain relation on AB . Finally, analytic solutions, corresponding to analytic boundary values φ and ψ , are discussed. J. B. Dias (College Park, Md.).

Source: Mathematical Reviews,

Vol 11 No. 10

LAVRENT'YEV, M. A.

PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT

AID 627 - I

BOOK

Call No.: AF497335

Authors: LAVRENT'YEV, M. A. and SHABAT, B. V.

Full Title: METHODS OF THE THEORY OF FUNCTIONS OF A COMPLEX VARIABLE

Transliterated Title: Metody teorii funktsiy kompleksnogo peremennogo

PUBLISHING DATA

Originating Agency: None

Publishing House: State Publishing House of Technical and
Theoretical Literature

Date: 1951

No. pp.: 606

No. of copies: 10,000

Editorial Staff

Editors: Academician M. V. Keldysh, and Yu. K. Solntsev

Contributors: A. V. Bitsadze and I. G. Aramovich

PURPOSE: Approved by the Ministry of Higher Education of the USSR as a textbook for students in engineering, mechanico-mathematical and physico-mathematical departments of state universities who have sufficient mathematical knowledge.

TEXT DATA

Coverage: In the preface, the authors state that the existing full courses of the theory of functions of a complex variable either presuppose readers specializing in mathematics and are difficult for non-mathematicians, or present only the elements of the theory. Their book, they say, treats the subject mainly in its practical applica-

1/2